

**REMARKS**

Claims 1-42 are currently pending. Claims 1-10, 14, 15, 20, and 29-42 stand rejected under 35 U.S.C. § 102(b) and claims 11-13, 16-19, and 21-28 stand rejected under 35 U.S.C. § 103(a).

Claims 1, 6, 20, 33, 34, and 40 have been amended. In view of the above amendments and for the reasons provided below, the Applicants respectfully traverse the grounds for rejection.

**SECTION 102(b) REJECTIONS**

Claims 1-10, 14, 15, 20, and 29-42 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent Number 6,646,272 to Rushbrooke ("Rushbrooke").

Independent claims 1 and 20 of the present invention recite, respectively, a microfluidic device and a method of manufacture. In pertinent part, the device includes a substrate, which has a multiplicity of optic fibers that are structured and arranged to be perpendicular to the plane of the substrate, and a layer that is formed on the surface of the substrate. This feature is also present in independent claim 37.

In contrast, Rushbrooke discloses an adapter plate (24) having bundles of optical fibers (32) and a sample plate (20) having a plurality of wells (26). The Examiner maintains that the sample plate (20) corresponds to the "layer" recited in the claim. The Applicants respectfully disagree.

As shown in Rushbrooke Figs. 3, 5, and 7, the sample plate (20) is not "formed on" the surface of the adapter plate (24) as recited in the claims; but, rather, an air gap exists between the

surfaces of each. Because Rushbrooke teaches moving sample plates to be in registration with the adapter plate, Rushbrooke does not teach, mention or suggest a layer that is integrally formed on the surface of the substrate.

Accordingly independent claims 1, 20, and 37 and all claims depending therefrom satisfy all of the requirements of 35 U.S.C. § 101, et seq. -- especially § 102(b) -- and are in condition for allowance. Withdrawal of the grounds for rejections is respectfully requested.

#### SECTION 103(a) REJECTIONS

Claims 11-13 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Rushbrooke and claims 16-19 and claims 21-28 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Rushbrooke in view of U.S. Patent Application Publication Number 2003/0027327 to Cunningham ("Cunningham").

For the same reasons that Rushbrooke does not anticipate independent claims 1 and 20, it also cannot make obvious claims depending therefrom. Nor can Cunningham make up for the shortcomings of Rushbrooke. More particularly, Cunningham does not teach, mention or suggest forming a layer on the surface of an optical fiber-filled substrate.

Accordingly claims 11-13, 16-19, and 21-28 satisfy all of the requirements of 35 U.S.C. § 101, et seq. -- especially § 103(a) -- and are in condition for allowance. Withdrawal of the grounds for rejections is respectfully requested.

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The Examiner is encouraged to telephone the undersigned attorney to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,

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